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## EXCESS EMISSIONS REPORTS

**September 16, 2020**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on September 16, 2020.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 168.2 ppm CO@7%O2, based on a 12-hour rolling average of 208.2ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on September 16, 2020 beginning around 8:20am and continued through the duration of the burn, ending at 10:00am.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused by the afterburner shutting down, thereby dropping the temperature in the afterburner and creating a spike in CO. The burn did not continue long enough for the 12-hour rolling average to recover from this spike.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The afterburner experienced an electrical fault that caused the automatic shutdown. The Qualified Operator checked all wiring after the burn but was unable to discover any issues that would have caused the electrical fault.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator

   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that the afterburner had shut down;
   d. Restarted the afterburner;
   e. Waited until the afterburner was back up to temperature before continuing the feed
   f. Once the afterburner temperature was above 1400°F, 1-minute CO @7%O2 emissions returned to permitted levels, and the operator finished the contraband burn.

**September 23, 2020**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on September 23, 2020.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 103.1 ppm CO@7%O2, based on a 12-hour rolling average of 143.1ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on September 23, 2020 beginning around 10:00am and continued through the duration of the burn, ending at 12:30pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

The nature of the excess emissions was excess CO @7%O2 emissions. At two points during the burn, items in the contraband feed combusted, and the CO spikes coincided with the combustion of these materials

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The excess emissions were not the result of a malfunction

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator
   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that CO emissions were returning to limit;
   d. Continued with the burn.

   After the burn concluded, the operator discussed the emissions resulting from the waste stream with the Customs and Border Protection agents and advised them that combustible items are not permitted in the waste stream. TIM's office staff also followed up with a call to Customs and Border Protection to re-iterate the importance of excluding combustible items from the waste stream.

**October 27, 2020**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on October 27, 2020.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 804.7 ppm CO@7%O2, based on a 12-hour rolling average of 844.7ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on October 27, 2020 beginning around 9:20am and continued through the duration of the burn, ending at 1:50pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. Afterburner damage resulted in extra air leaking into the afterburner. The afterburner would not maintain a high enough temperature, causing excess CO @7%O2 emissions

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The operator repaired the damaged areas of the afterburner, patching holes and resealing to prevent air leaks for future burns.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator
   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that the afterburner temperature was too low;
   d. Saw that stopping the feed was contributing to the falling afterburner temperature;
   e. Started the feed again to help build heat in the furnace (and therefore the afterburner) through combusting contraband material;
   f. Once the afterburner temperature was above 1400°F, 1-minute CO @7%O2 emissions returned to permitted levels, and the operator finished the contraband burn.

**November 10, 2020**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on November 10, 2020.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

Excess Emissions were 9.6 ppm CO@7%O2, based on a 12-hour rolling average of 49.6ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on November 10, 2020 beginning around 9:20am and continued through the duration of the burn, ending at 2:30pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The afterburner temperature dropped, causing a momentary spike in CO emissions.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The excess emissions were not the result of a malfunction.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator

   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that the afterburner temperature was too low;
   d. Reduced the dilution air opening to hold heat in the afterburner;
   e. Saw that stopping the feed was contributing to the falling afterburner temperature;
   f. Started the feed again to help build heat in the furnace (and therefore the afterburner) through combusting contraband material;
   g. Once the afterburner temperature was above 1400°F, 1-minute CO @7%O2 emissions returned to permitted levels, and the operator finished the contraband burn.

**November 24, 2020**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on November 24, 2020.

1. *Identity of each stack or other emission point where the excess emissions occurred*

Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 49.1 ppm CO@7%O2, based on a 12-hour rolling average of 89.1ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on November 24, 2020 beginning around 8:00am and continued through the duration of the burn, ending at 2:30pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The afterburner temperature was too low when the feed began, causing CO to spike.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The excess emissions were not the result of a malfunction.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator

   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that the afterburner temperature was too low;
   d. Saw that stopping the feed was contributing to the falling afterburner temperature;
   e. Started the feed again to help build heat in the furnace (and therefore the afterburner) through combusting contraband material;
   f. Once the afterburner temperature was above 1400°F, 1-minute CO @7%O2 emissions returned to permitted levels, and the operator finished the contraband burn.

**December 9, 2020**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on December 9, 2020.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 46.3 ppm CO@7%O2, based on a 12-hour rolling average of 86.3ppm reported by the CEMS less the applicable emissions limitation of 40ppm. TIM believes the amount of excess emissions as reported by the CEMS was inaccurate, but is providing this excess emissions report in order to provide additional detail to PDEQ

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on December 9, 2020 beginning around 8:00am and continued through the duration of the burn, ending at 1:30pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. TIM believes an error in the averaging formula used in the software, caused the reports generated to mis-report the hourly emissions for the first hour of the burn. The raw data does not indicate 1-minute CO@7%O2 emissions above 121.6ppm at any point of the burn, but the reports show a one-hour average of CO@7%O2 of 464.3ppm for the first hour of the burn. This, in turn, mathematically skews the 12-hour average.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   Because the 1-minute data did not show excessive CO excursions, the OSWI unit operator did not take any steps on December 9, 2020 to remedy excess emissions. Now that TIM has examined the raw data more closely, it is working with its outside engineer to correct any formulas that may have resulted in incorrect averaging.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Because the 1-minute data did not show excessive CO excursions, the OSWI unit operator did not take any steps on December 9, 2020 to remedy excess emissions. Now that TIM has examined the data more closely, it is working with its outside engineer to correct any formulas that may have resulted in incorrect averaging.

**January 12, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on January 12, 2021

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit from the feed end of the incinerator tube, and from the main exhaust stack, EPN 1.

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess emissions emanating from the feed opening of the OSWI unit did not pass through the CEMS, so no data regarding emissions is available. A Method 9 reading was not taken as the operator was engaged in trying to find and repair the cause of the excess emissions. Emissions did not cross property lines.
   Excess Emissions also included 457.2 ppm CO@7%O2, based on a 12-hour rolling average of 497.2ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess visible emissions occurred on January 12, 2021 beginning around 1:30pm and were controlled by approximately 2:30pm. Excess CO@7%O2 emissions occurred on January 12, 2021 beginning around 12:10pm and continued through the duration of the burn, ending at 6:00pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the feed end of the incinerator tube to TIM OSWI unit and the main stack of the TIM OSWI unit

5. *Nature and cause of the emissions*

   The nature of the excess emissions was visible smoke and excess CO @7%O2 emissions. The excess emissions were caused by the failure of the baghouse air compressor.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The baghouse air compressor failed due to an electrical short. The wires were repaired by the operator upon finding the cause of the malfunction. On January 13, the wires were inspected by TIM's mechanic and insulated to prevent the recurrence of this malfunction.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator
   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Checked for baghouse system malfunction – noticed that the magnahelic was climbing;
   d. Attempted to pulse the bags;
   e. Performed a series of tests to try to pulse the bags again;
   f. Continued to investigate why the bags would not pulse – found the air compressor was not running;
   g. Proceeded to conduct necessary repairs to get the air compressor started again.

   Once the operator was able to restart the air compressor, excess emissions stopped.

**January 14, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on January 14, 2021.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 625.1 ppm CO@7%O2, based on a 12-hour rolling average of 665.1ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on January 14, 2021 beginning around 10:00am and continued through the duration of the burn, ending at 12:50pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused by a malfunction of one of the gas jets in the afterburner, which would not stay lit. The operator was unable to keep temperatures elevated, resulting in excess CO.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   TIM staff repaired the gas jet in the afterburner on January 15, 2021.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator
   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that the afterburner temperature was too low;
   d. Saw that stopping the feed was contributing to the falling afterburner temperature;
   e. Started the feed again to help build heat in the furnace (and therefore the afterburner) through combusting contraband material;
   f. Once the afterburner temperature was above 1400°F, 1-minute CO @7%O2 emissions levels began to drop, and the operator finished the contraband burn.

**February 4, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on February 4, 2021.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

Excess Emissions were 1314.4 ppm CO@7%O2, based on a 12-hour rolling average of 1354.4ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on September 23, 2020 beginning around 11:10am and continued through the duration of the burn, ending at 4:40pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused by multiple items in the contraband feed combusting, causing the afterburner to limit out and shut down every few minutes throughout the course of the burn. Subsequent low temperatures because of shutdown and restart caused excess CO.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The excess emissions were not the result of a malfunction

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator tried unsuccessfully to get the afterburner to stay on. After the burn concluded, the operator discussed the emissions resulting from the waste stream with the Customs and Border Protection agents and advised them that combustible items are not permitted in the waste stream. TIM's office staff also followed up with a call to Customs and Border Protection to re-iterate the importance of excluding combustible items from the waste stream.

**February 19, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on February 19, 2021.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 2774.3 ppm CO@7%O2, based on a 12-hour rolling average of 2814.3 ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on February 19, 2021 beginning around 8:50am and continued through the duration of the burn, ending at 10:45am.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused because the afterburner would continuously shut down and would not restart.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   After the discovery of the broken wires on February 11, 2021, outside engineer Bruce Baker came on site to repair the thermocouple to which the broken wires belonged. In accordance with the TIM O&M plan, spare thermocouples are kept on site. Unfortunately, when a spare was used to replace the broken one, the spare was found to be faulty. Mr. Baker instituted a temporary solution to try to keep the CEMS operational until new thermocouples could be ordered, by using an old thermocouple from a different portion of the OSWI, but this, too, had problems, and resulted in the continuous shut-down of the afterburner. Mr. Baker has ordered new thermocouples and is awaiting their arrival to make a permanent repair to the afterburner.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   The OSWI unit operator attempted to keep the afterburner operational in order to reduce the CO emissions.

**February 23, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on February 23, 2021.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 1728.8 ppm CO@7%O2, based on a 12-hour rolling average of 1768.8 ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on February 23, 2021 beginning around 8:30am and continued through the duration of the burn, ending at 11:20am.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused because the afterburner would continuously shut down and would not restart.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   After the discovery of the broken wires on February 11, 2021, outside engineer Bruce Baker came on site to repair the thermocouple to which the broken wires belonged. In accordance with the TIM O&M plan, spare thermocouples are kept on site. Unfortunately, when a spare was used to replace the broken one, the spare was found to be faulty. Mr. Baker instituted a temporary solution to try to keep the CEMS operational until new thermocouples could be ordered, by using an old thermocouple from a different portion of the OSWI, but this, too, had problems, and resulted in the continuous shut-down of the afterburner. Mr. Baker has ordered new thermocouples and is awaiting their arrival to make a permanent repair to the afterburner.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   The OSWI unit operator attempted to keep the afterburner operational in order to reduce the CO emissions.

**February 25, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on February 25, 2021.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 473.5 ppm CO@7%O2, based on a 12-hour rolling average of 513.5 ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on February 25, 2021 beginning around 10:10am and continued through the duration of the burn, ending at 1:40pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused because the afterburner would not stay up to temperature.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   TIM has discussed the ongoing afterburner difficulties with its outside engineers, including Bruce Baker and Eric Anderson of EPA systems. After a careful investigation into the raw CEMS data, TIM has determined the need for an additional heat source in the afterburner and plans to install another burner. Also, Mr. Baker is working on a program that would allow the computer to identify trends in the afterburner temperature, and rapidly adjust the dampers and dilution air to prevent the afterburner from exceeding its limits and shutting down. TIM is hopeful that the computer will be able to identify trends and affect afterburner temperature more rapidly and effectively than the operator is able to do so, thereby reducing the occurrence of afterburn shutdown.

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator

   a. Stopped the contraband feed to begin the shutdown process;
   b. Checked the afterburner chamber operating temperature;
   c. Saw that the afterburner temperature was too low;
   d. Saw that stopping the feed was contributing to the falling afterburner temperature;
   e. Started the feed again to help build heat in the furnace (and therefore the afterburner) through combusting contraband material;
   f. Once the afterburner temperature was above 1400°F, 1-minute CO @7%O2 emissions levels began to drop, and the operator finished the contraband burn.

**March 2, 2021**

Tucson Iron and Metal (TIM) is providing this excess emissions report in response to NOV #127-0021R for the contraband burn conducted on March 2, 2021.

1. *Identity of each stack or other emission point where the excess emissions occurred*

   Excess emissions occurred from TIM Other Solid Waste Incinerator (OSWI) unit exhaust stack EPN 1

2. *Magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions*

   Excess Emissions were 69.6 ppm CO@7%O2, based on a 12-hour rolling average of 109.6 ppm reported by the CEMS less the applicable emissions limitation of 40ppm.

3. *Date, time and duration or expected duration of the excess emissions*

   Excess emissions occurred on March 2, 2021 beginning around 8:40am and continued through the duration of the burn, ending at 12:20pm.

4. *Identity of the equipment from which the excess emissions emanated*

   Excess emissions emanated from the TIM OSWI unit exhaust stack EPN 1

5. *Nature and cause of the emissions*

   The nature of the excess emissions was excess CO @7%O2 emissions. The excess emissions were caused because the DEA agents were feeding large bales of contraband by hand too rapidly into the incinerator. Some of the bales exceeded the size limitations of the conveyor, so

the OWSI unit operator instructed agents to feed the large bales by hand, at a certain rate. The agents disregarded the operator's instructions, and fed multiple large bales at once, resulting in a CO spike.

6. *If the excess emissions were the result of a malfunction, steps taken to remedy the malfunction and the steps taken or planned to prevent the recurrence of such malfunctions*

   The excess emissions were not the result of a malfunction

7. *The steps that were or are being taken to limit the excess emissions; If the excess emissions resulted from start-up or malfunction, the report shall contain a list of the steps taken to comply with permit procedures.*

   Once excess emissions began, the OSWI unit operator

   a. Stopped the contraband feed to begin the shutdown process;
   b. Saw that the agents were feeding the bales too fast;
   c. Instructed the agents to stop the feed;
   d. Saw that CO levels returned to permitted levels;
   e. Resumed and finished the contraband burn.